Classroom Engagement: Encouraging Attention Vs Punishing Distraction

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AREA OF INQUIRY

Given the rise in ownership and use of personal communication devices—Smartphones—by undergraduate students while attending classes, this study examines undergraduate students' attitudes and perceptions regarding their rights to use such devices and their knowledge regarding the negative effect such usage has on their ability to synthesize new subject material.

Given prior research into the negative aspects of digital devices in the classroom, this study examines the effect, if any, of using positive reinforcement versus restrictive bans to encourage believed appropriate learning behavior.

STATUS

Studies linking the use of digital tools such as Smartphones for non-classroom purposes continue to accumulate.

- a majority reinforce that such distracting behavior has a negative effect on learning outcomes (Kuznekoff, Munz & Titsworth, 2015; Beland & Murphy, 2015; Richtel, 2012).

- a minority suggest that faculty should consider how to integrate such tools into the learning environment (Purcell, et al, 2012).

HYPOTHESIS

It is believed that offering an incentive for students to not use their phones for non-class activities would result in a better learning environment given reduced distractions and a tacit acknowledgement regarding their rights to use their phones in the classroom. Rather than punish, ask for 'buy-in'.

Null hypothesis: *there will be no significant shift in overall average course scores between classes that offer such an incentive and those that do not.*

Ho: $\bar{\mu}_{F16} \geq \bar{\mu}_{S17}$

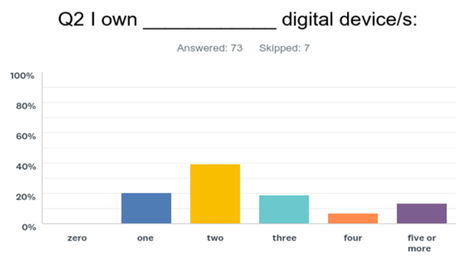
Ha: $\bar{\mu}_{F16} < \bar{\mu}_{S17}$

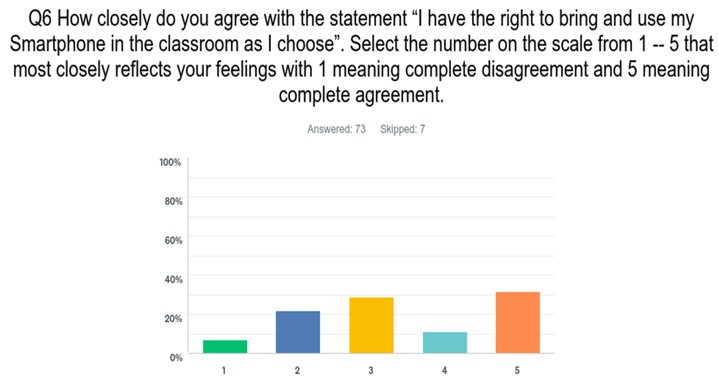
STUDY DESIGN

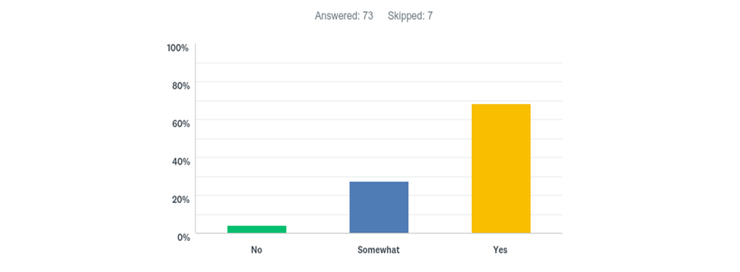
- Spring 2017 semester students (n=90) compared to Fall 2016 (n=100)
  - two sections of CAIS 101(statistics) and two of Cais 191(computer foundations)
  - primarily 1st and 2nd year students
  - online questionnaire that replicated questions used in the digital device national survey (McCoy, 2016).

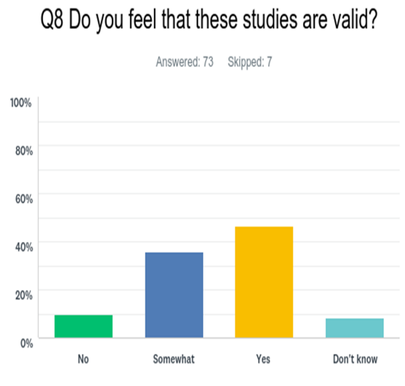
- During the spring semester the students had access to a smartphone app that measures the amount of time the phone is inactive during the class. Students earn points for participation.
- Syllabus details penalties and rewards

Findings--1

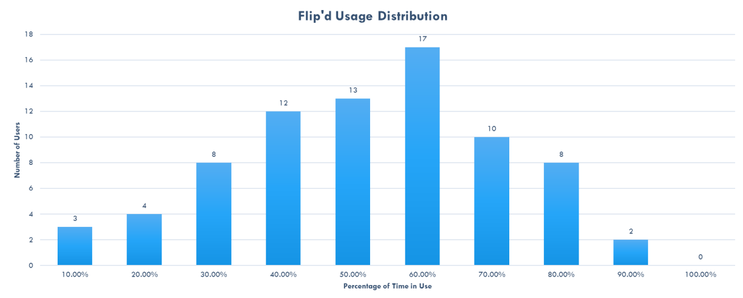


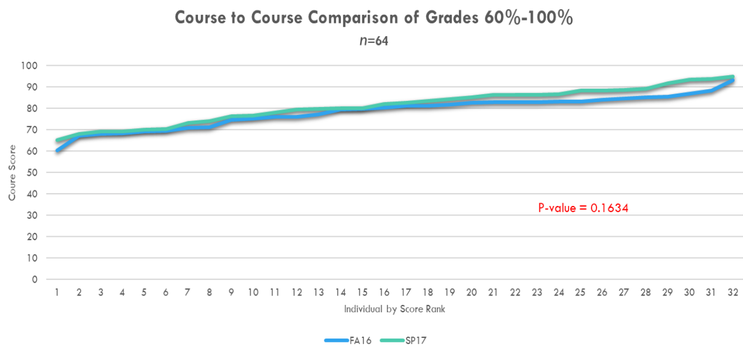


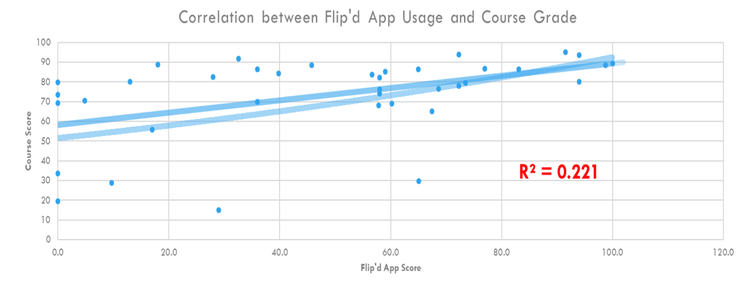




Findings--2







STUDY FINDINGS—SUMMARY

- UB STUDENTS BELIEVE THEY HAVE THE RIGHT TO USE THEIR DIGITAL DEVICES IN THE CLASSROOM FOR NON-CLASS ACTIVITIES REGARDLESS OF THE EFFECT ON LEARNING OUTCOMES. THEY ARE AWARE OF THE DISTRACTION THAT SUCH USE CAUSES TO THEMSELVES AND OTHERS (SURVEY RESULTS).
- SUCH KNOWLEDGE AND BELIEF IS NOT ATYPICAL OF CURRENT COLLEGE STUDENTS (MCCOY,2016).
- ALTHOUGH INCENTIVES ARE PERCEIVED TO ENCOURAGE BEHAVIOR (STUDENTS AND TEACHERS), DATA AS MEASURED IN COURSE SCORES DOES NOT SUPPORT THAT BELIEF.
- THE DATA SUGGESTS THAT NEW LEARNING MODELS NEED TO BE EXAMINED AND DEVELOPED.